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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/664,332	09/18/2000	Noriya Hayashi	001195	4422
23850	7590	11/17/2003	EXAMINER	
ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP 1725 K STREET, NW SUITE 1000 WASHINGTON, DC 20006			SELLERS, ROBERT E	
			ART UNIT	PAPER NUMBER
			1712	

DATE MAILED: 11/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action**

Application No.

09/664,332

Applicant(s)

HAYASHI, NORIYA

Examiner

Robert Sellers

Art Unit

1712

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 23 October 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY** [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
- ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☒ The proposed amendment(s) will not be entered because:
- (a) ☒ they raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☒ they raise the issue of new matter (see Note below);
- (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See the attachment.

3. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☐ The a) ☐ affidavit, b) ☐ exhibit, or c) ☐ request for reconsideration has been considered but does NOT place the application in condition for allowance because: \_\_\_\_\_.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☒ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: \_\_\_\_\_.

Claim(s) objected to: \_\_\_\_\_.

Claim(s) rejected: 1-3,6-8,10,12,22,27 and 28.

Claim(s) withdrawn from consideration: 9, 17-19, 21 and 23-26.

8. ☐ The drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_.
10. ☐ Other: \_\_\_\_\_

Robert Sellers  
Primary Examiner  
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The amendment after Final rejection filed October 23, 2003 has been denied entry. The newly added "chain reaction" curing mechanism is not supported by the specification. Page 50, lines 14 and 16 describes "chain curing." It cannot be ascertained whether the claimed "chain reaction" is the same as the disclosed "chain curing." There is no description nor enablement as to the mechanism of "chain reaction" or "chain curing."

Starkey affirmatively recites a maleic anhydride hardener (col. 20, lines 38-39) and an amount of hardener of as much as 10 parts by weight (col. 21, line 24) which converts to 0.32:1 (Final rejection mailed July 24, 2003, page 3, second paragraph). The molar ratio cannot be discounted just because the maleic anhydride is not exemplified. The teachings of a reference pertains to the entire disclosure wherein the use of 10 parts by weight of maleic anhydride is clearly within the purview of Starkey.

The claims requires a sulfonium salt of formula (IV), (IV') or (V) photoinitiator "which makes it possible to cure by chain reaction said photopolymerizable resin." The phrase "which makes it possible" merely defines the capability of curing by chain reaction and is not an affirmative limitation requiring the curing of the photopolymerizable resin by chain reaction. Furthermore, the claims are directed to "[a]n energy-ray curing resin composition" wherein the means of curing is not a critical limitation. The cited prior art sets forth the claimed components without the claimed chain curing possibility but does not preclude such a mechanism in the course of their particular curing processes.

The claims are not directed to a process of preparing a resin wherein the photopolymerizable resin is cured by chain reaction to distinguish over the cited references which inherently cures by such a mechanism based on the equivalent photopolymerizable resins and sulfonium photoinitiators of the prior art and claims.

The declaration filed March 3, 2003 is deficient for the reasons of record set forth in the non-Final rejection mailed April 16, 2003 (pages 4-5).

The claims denote "polymerization by both of light and heat (lines 9-10)" which embraces the curing conditions of the Green patents regardless of the particular mechanism.

Hamazu et al. (col. 5, lines 20 and 64-65) espouses "initiating a polymerization quickly by irradiation of for instance light or electron beam and/or by a little heat" with the elected species of photopolymerization initiator (col. 3, lines 29-30 and col. 6, Table 1, first formula, benzyl-4-hydroxyphenylmethyl sulfonium hexafluoroantimonate, i.e. Sanaid SI-80L, described on page 66, lines 19-20 of the specification and conforming to claimed formula (V)) which directly contradicts the allegation that the disclosed elected species of cationic polymerization catalyst claimed suppresses the reaction.

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The teachings of a reference are not confined to the examples. Buchwalter et al. (col. 7, line 3) describes from 0.5-10% by weight of a sulfonium (col. 3, line 22) photoinitiator which is within the claimed range of from 0.1-5.7% by weight. A molar ratio of hexahydrophthalic anhydride:bis(3,4-epoxycyclohexylmethyl) acetal of 0.93:1 is exhibited (col. 8, Example 1) which is encompassed by the claimed molar ratio of from 0.3-1.4:1.

Curing by patentees is conducted at from 100-165°C and electromagnetic radiation (col. 8, lines 42-44) in the presence of a sulfonium photoinitiator and an anhydride which are curing conditions amenable to the benzyl-4-hydroxyphenylmethyl sulfonium hexafluoroantimonate initiator of Hamazu et al. The claims are drawn to an energy-ray curing resin composition which includes the composition of Buchwalter et al. cured by electromagnetic radiation.

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Monday to Friday from 9:30 to 6:00 EST



Robert Sellers  
Primary Examiner  
Art Unit 1712

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11/12/03